1984

Wetlands and Values

Cooperative Extension South Dakota State University

FS 824

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U.S. Fish and Wildlife Service
South Dakota Cooperative Wildlife Research Unit
South Dakota Cooperative Extension Service

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Is it the land that shapes the farmer, that gives him his strength, his independence, his endurance? Then what is it that owning a wetland gives him?

Is it something he can't put into words: a sense of yearly rhythms and the rightness of things when he sees a duck guiding her brood along the edges, watches the V spreading out from a muskrat swimming, hears the voices of wild animals in the night?

Is it a more tangible value: a goose for Christmas, muskrat pelts, bales of hay, water for his livestock?

Wetlands and ice

One value that a wetland offers is a sense of history. Wetlands are here because of the glaciers that once covered parts of North America.

Some 15,000 years ago, when the last glacier retreated from this area, the land was scoured and pockmarked with millions of water-filled depressions. We came to call it the prairie pothole region. It includes portions of the Dakotas, Minnesota, Montana, Iowa, and south central Canada.

It became, and still is, North America's best waterfowl production region. The prairie potholes occupy only 10% of North America's duck producing area, but they in the past have been reported to raise 50% of the waterfowl in an average year.

How can we reconcile such excellent waterfowl production with the periodic droughts we've all seen on the northern plains? How can such an environment raise ducks better than some more favored areas?

The answer is that such droughts are **natural** and **periodic** and are usually local. While they slow duck production in the prairie potholes for one or more years, they dry out the bottoms of the potholes, slowing the accumulation of plant debris that would eventually fill the basin if unchecked. When the rains come again, the fresh water carries nutrients released from decomposing plant debris. Then there is more food for ducks and broods.

Too frequently the effects of these droughts become permanent when potholes are drained or filled. Then duck production, water storage, and intangible values are lost forever.

Wetlands and values

Over 100 species of birds depend on prairie wetlands for their survival. Wetland basins as well as adjacent uplands provide homes for deer, pheasants, ducks, and many other animals we glimpse only occasionally. Wetlands help to purify polluted water, provide flood control, and contribute to aquifer and groundwater recharge.

They are one of the most important producers of hay and range forage in the prairie pothole region. Wetlands also are a setting for

Wetlands in the fall and spring belong to the ducks. In the fall, the larger permanent wetlands are stopovers for migrants, but in the spring you will find almost every little wet spot in the prairie pothole region scouted out by ducks eager to nest.

In the wintertime, wetlands may be the only cover around. Overwinter survival of many game species depends directly on the quantity and quality of wetland cover in the prairie pothole region. Besides pheasants like these, deer, cottontails, furbearers, and other species will attempt to find shelter from winter winds in wetlands.

recreation—hunting, trapping, canoeing, and birdwatching.

Wetlands and wildlife

Acre for acre, wetlands can support a greater variety and number of animals than any other biological community on the continent. Muskrats, herons, turtles, and crayfish live their entire lives in wetlands. Marsh hawks, pheasants, and foxes come for food and cover.

Those larger wetlands bordering lakes and streams are spawning grounds for northern pike; the vegetation growing along the edges gives safe cover to young fish. The abundant aquatic insect life associated with wetlands is an important food for fish and ducklings. In winter, wetlands provide essential cover for deer, pheasant, muskrat, and other local wildlife.

Wetlands and sizes

Water alone is not enough to support waterfowl and other wildlife. It is the mixture of wetlands of different sizes and the availability of safe upland nesting habitat that makes possible a variety of wildlife in the prairie pothole region.

In "good" springs, every little depression that is filled with water attracts nesting ducks. Fortunately for both hens and broods, the surface waters of these shallow wetlands warm up rapidly in early spring and produce rich food crops of aquatic insects, which the hens need to sustain high levels of egg production and which the new broods need for first food.

As these early season wetlands dry up in sumer, dabbling ducks such as mallards and blue-winged teal and their broods shift to more permanent potholes and lakes where aquatic insects are now abundant.

During the molting period of mid and late summer, ducks become flightless and need extensive areas of shallow water with a high quality food source and good cover to protect them from predators. In the fall and

Without fuss, without cost to us, wetlands efficiently cleanse surface and ground water of impurities and pollutants. They collect floodwaters and slowly release them, preventing damage downstream.

early winter, larger lakes and permanent wetlands become the resting and feeding stops for waterfowl riding the storm fronts down from the north.

Wetlands and people

A healthy wetland is a "no cost" pollution treatment plant. Aquatic vegetation traps, uses, and concentrates both man-made and natural pollutants.

In fact, some towns and cities have incorporated man-made marshes into their sewage treatment systems. As water gradually flows through marshes and wetlands, suspended sediments and chemicals are removed, and the water quality is improved. However, there is a limit to how much contamination a marsh can receive without being destroyed.

Where farms and feedlots occupy the watershed, runoff is often laden with agricultural chemicals, organic matter, and sediments. If this runoff, which is particularly rich in nitrogen and phosphorus, reaches fishing and boating lakes before first filtering through a prairie wetland, it might over-fertilize the lake and cause unattractive, fish killing algal blooms. Prairie wetlands also absorb and digest agricultural pollutants that otherwise would contaminate the rivers and groundwater that are often our drinking water sources. Again, a wetland can "overload" with chemicals and be destroyed.

Wetlands provide another public service by collecting and holding flood waters from heavy rains and snows. The slow release of these waters reduces flood heights and downstream damage.

Some wetlands become especially important during drought when they can be used for limited livestock watering.

Wetlands and the lucky ones

Most wetlands in the prairie pothole region are privately owned. But many of the values derived from prairie wetlands—such as water purification, flood control, and waterfowl habitat—benefit everyone. Consequently, even though they may be privately owned, wetlands have enormous value to all the public.

It is easy to overlook both the public values and the intangible, personal benefits in the ownership of a wetland. And it is often easy to forget the real monetary returns a wetland can give to an individual or the nation. So, all over the prairie pothole region, drainage continues at an alarming rate.

About half of the wetlands in the region were drained before 1950. Between 1964 and 1968, just 4 years, an estimated 125,000 acres of prime wetlands were drained in Minnesota and the Dakotas alone. If drainage continues at the present rate, within a few decades the privately owned prairie potholes will be gone.

In the meantime, a farmer works hard to make the rest of his land produce. The wetland, however, gives to him freely—hay, grazing, water, wildlife, and the pleasures he can't put into words. The farmer who owns a wetland area is the lucky one. He has more wealth than he can pocket.

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File: 9.1-1 ES 178-97.